

Low-profile, seven-actuator 6-DOF motion platform

Designed for full-vehicle simulation where indoor clearance is limited.



①This product is a motion platform. The vehicle and large LED screens shown are not included in the standard supply.

A layered motion mechanism balances vehicle mounting height with the six-axis motion envelope, providing a motion base for the customer's vehicle, cockpit and visual system.

6 DOF

Three translations · Three rotations

4 + 3

Two actuator groups, upper and lower

1500 kg

Drawing-specified load · Operating conditions confirmed per project

3000 × 2500 mm

Reference working-platform dimensions

Lower vehicle mounting position

The design prioritizes a low mounting surface to reduce the combined vertical space occupied by the platform and vehicle.

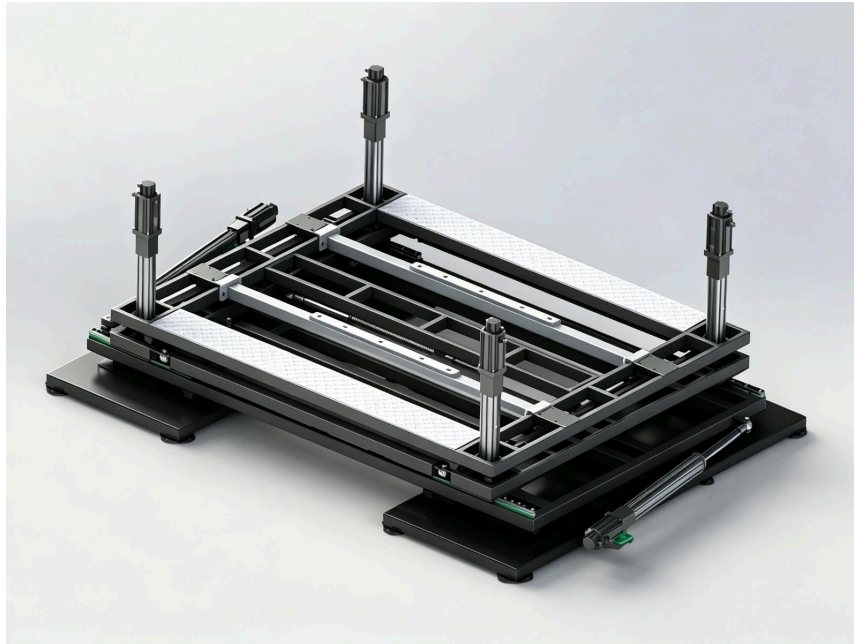
Horizontal motion on the lower level

The lower mechanism handles surge, sway and yaw; the upper mechanism handles heave, pitch and roll, allowing the stroke of each group to be allocated separately.

Plan the motion envelope for the site

Confirm the installation using payload height, center of gravity, motion poses and indoor clearance, together with floor load capacity and fixing conditions.

4 + 3 structure



Structure illustration · Mounting interfaces subject to approved drawings

4 Upper actuators Vertical motion & attitude

↑ Heave ↻ Pitch ↺ Roll

Synchronized and differential movement of four actuators changes the height and tilt of the load-bearing surface.

3 Lower actuators Horizontal motion & heading

↔ Surge ↔ Sway ↻ Yaw

The lower mechanism moves the entire upper assembly to produce longitudinal and lateral travel and changes in heading.

Why grouped actuation matters

Allocate stroke to specific motions.

For example, during pure longitudinal travel, the lower stage can move the entire upper assembly while the four upper actuators retain their lengths. This arrangement helps reduce stroke coupling between the two groups. Available travel within each group and in combined motion still depends on mechanism geometry and control limits.

Motion parameters & installation space.

Motion and dimensional values follow the current concept drawing; power and control deliverables follow this product configuration. Combined-motion limits, load conditions and mounting interfaces are confirmed in the project technical specification.

Six-axis motion parameters

Motion	Range	Speed
Heave	±100 mm	150 mm/s
Surge · longitudinal	±250 mm	150 mm/s
Sway · lateral	±100 mm	150 mm/s
Pitch	±6.5°	9°/s
Roll	±10°	9°/s
Yaw · heading	±10°	7°/s

Individual-axis values do not imply that all maximum values can be reached simultaneously in any combined pose.

Power & layout reference

Supply voltage

220 V

Product power

16 kW

Drawing-specified load

1500 kg

Working platform

3000 × 2500 mm

Base

3800 × 2900 mm

Plan-space requirement shown on drawing

3500 × 4800 mm

Minimum tread-surface height

614 mm

Minimum chassis-fixing surface height

636 mm

The minimum support-surface height is not the highest point of the complete installation. Allow for the payload, its highest position during heave and tilt, and maintenance and protective clearances.

During operation, we recommend keeping an approximately 1 m zone around the motion envelope clear of people. This is a personnel-clearance recommendation; the installation footprint must still be confirmed for the platform, mounted payload and actual range of motion.

Specify how the total load is divided among the vehicle, occupants and mounting accessories, so the conditions applicable to the 1500 kg drawing value can be checked.

Supply scope

This product

Seven-actuator 6-DOF motion platform

Define the supply around the platform structure, electric actuators and project motion requirements.

Control cabinet, drives and other hardware, together with payload-mounting adaptations, follow the order's technical equipment list.

Application demonstration equipment

Vehicle & LED display system

The car, large LED screens and site facilities in the photos and video illustrate an application; they are not included as standard equipment with this product.

Supplied with the platform

Motion control algorithms & interface documentation

Motion control algorithms and an interface documentation package are provided to support platform control and integration with the customer's supervisory system.

Specific interface formats and integration scope are confirmed in the project technical specification.

Share your site conditions, then confirm the configuration.

Payload dimensions & total load

Payload center of gravity & fixing method

Indoor clearance & available floor space

Floor capacity & installation conditions

Target motion envelope

Existing software & control interfaces

Specify how the total load is divided among the vehicle, occupants and mounting accessories, so the conditions applicable to the 1500 kg drawing value can be checked.

This website presents selected multi-axis motion platform models and applications, rather than our full product range or all available configurations. If you cannot find a suitable model, contact us with your payload, motion range, installation space and application requirements. We can help recommend a suitable product or develop a custom solution for your project.

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